



MILITARY SATELLITE COMMUNICATIONS

Telespazio (a Leonardo-Finmeccanica/Thales company) currently plays a strategic role in tactical military satellite communications (Milsatcom), thanks to its multi-year experience in satellite telecommunications and to its participation in the SICRAL and ATHENA FIDUS programmes.

THE SICRAL PROGRAMME

SICRAL (Sistema Italiano per Comunicazioni Riservate ed Allarmi, Italian System for Secure Communications and Alerts), is Italy's satellite system for military communications, boasting unprecedented flexibility and versatility. The system allows interoperability between the networks of Defence, law enforcement and civil emergency agencies, and those responsible for the management of strategic infrastructure. The SICRAL programme improves military satellite communications capacity for strategic and tactical links in Italy and for out-of-area operations, with terrestrial, naval and air platforms assured until 2030 with the launch of new satellites.

The programme is divided into three phases. The first began in 2001 with the launch of the SICRAL 1, a satellite that is still in operation. The second phase began in 2009 with the launch of SICRAL 1B, which has an estimated operational life span of 13 years. The third phase, in cooperation with France, started from April 2015 with the launch of SICRAL 2, with an estimated operational life span of 15 years.

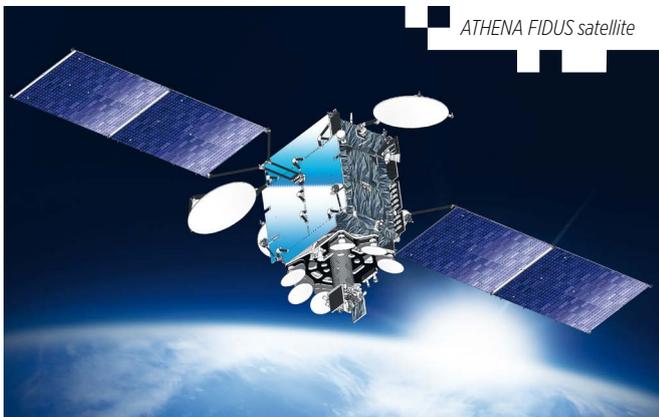
SICRAL 2

SICRAL 2 is a geostationary satellite operating in the UHF and SHF bands, able to enhance the capability of military satellite communications already offered by SICRAL 1 and SICRAL 1B and by France's Syracuse System. In particular SICRAL 2 supports satellite communications for the Italian and French Armed Forces, anticipating the needs of growth and development in the next few years. The satellite has an additional back-up function to the current capacity in SHF band of the French Syracuse 3 system and that of SICRAL 1B allocated to NATO communications.

The system was designed and developed to provide seamless integration with existing national infrastructure and those of allied countries.

TELESPAZIO'S ROLE

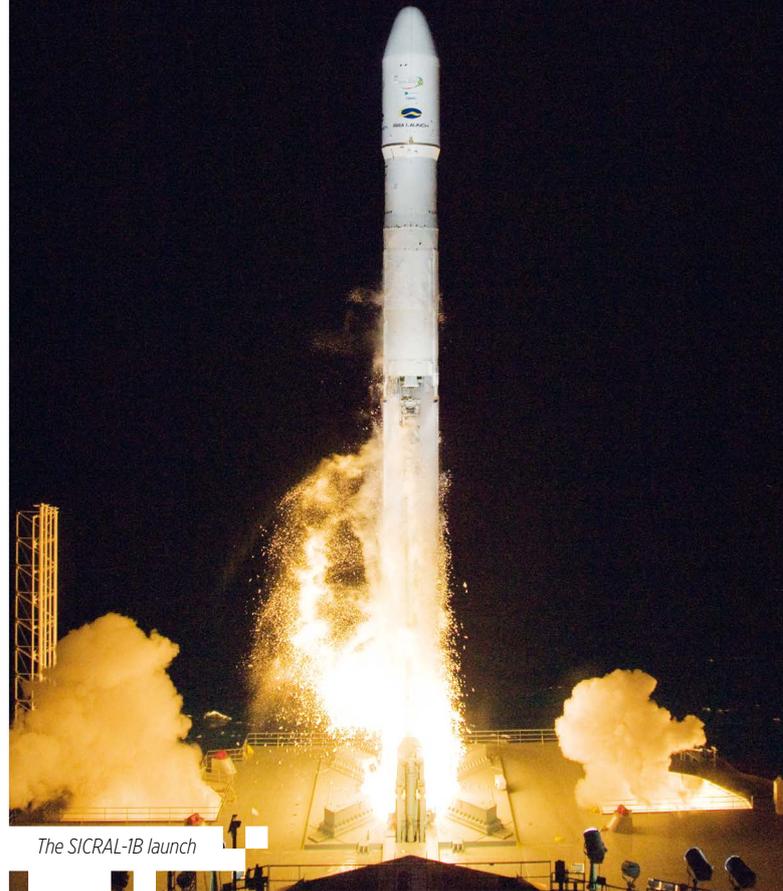
For SICRAL 1 Telespazio managed the LEOP (Launch and Early Orbit Phase), the first IOT (In Orbit Test) and the design, implementation, integration and testing phases of the ground segment at the Vigna di Valle Control Centre and at the Fucino Space Centre. For SICRAL 1B Telespazio managed the launch services, LEOP, the first test runs for IOT, and the implementation of the ground segment at the Control Centre in Vigna di Valle and at the Fucino Space Centre. Following verification of the correct positioning and commissioning of the satellite, Telespazio transferred all telecommunications control activities to Vigna di Valle with Fucino playing a back-up role. Telespazio managed SICRAL 2 launch services, LEOP, the IOT phase, and the implementation of the ground segment at the Vigna di Valle Control Centre with the Fucino Space Centre as a back up Telespazio also managed the Interconnection system between the Italian and French mission centres. Telespazio, by contributing a significant portion of the direct costs of SICRAL 1B and SICRAL 2, has consolidated its role of satellite operator in the defense sector. It has a share of the satellites' transmission capacity, therefore being able to offer telecommunications services to the armed forces of NATO member countries.



ATHENA FIDUS satellite



Vigna di Valle Control Centre



The SICRAL-1B launch

THE ATHENA-FIDUS PROGRAMME

ATHENA FIDUS (Access on THEatres and European Nations for Allied forces - French Italian Dual Use Satellite) is a French-Italian telecommunications system based on a geostationary satellite for dual broadband communication services. The Athena Fidus system has been developed by ASI (the Italian Space Agency) and CNES (Centre National d'Etudes Spatiales) in the cooperation framework agreement signed by the Space Agencies and the Italian and French Ministries of Defence.

ATHENA FIDUS implements a telecommunications infrastructure that can support/complement the terrestrial networks in the event that the latter are unavailable or damaged. The satellite will have an expected operational lifespan of 15 years. ATHENA FIDUS is a supplement of the capabilities already offered by the Syracuse and SICRAL systems. The satellite was successfully launched on 6 February 2014 from the European space base at Kourou, French Guiana, using an Ariane 5 launch vehicle.

TELESPAZIO'S ROLE

Telespazio managed the ATHENA FIDUS launch services, LEOP and the IOT phase. It also took part in the implementation of the ground segment and, specifically, of the telecommunications aspects at the Vigna di Valle Centre.